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COLD WAVES.

Every one sees in city papers the announcement from the Signal Offices, "Cold wave approaching," and but few are aware of its size, and still fewer as to whether it will reach them.

Cold waves have been defined as those where the thermometer falls 15°. This was the former decision of the Signal Office, but some changes in the rule have been made that deserve more than a passing notice from those to whom the weather is profit, and, it may be, life. Now a cold wave signal for a large portion of the country, including Pennsylvania, nearly all of New York except the city, and New England,

Maryland, Delaware, Virginia, etc., a fall of 16° to 36° is required to verify a "signal."

Nor is this all. The fall is now given an approximate area, or size, dependent on the amount of fall. Thus, that of 20° has had one of over 1,000,000 square miles, and that of 10° nearly 3,000,000. Yet cold wave predictions have the large limit of 50,000 square miles in which to fall, an area equal to that of many of our States. Again, the large majority of cold waves have the form of long ellipses stretching over the country from N. W. and N. to S. E., which makes their determination still more difficult, especially when a minute is all that can be given to a State or section by the "forecast" official of the Signal Service. The difficulty of making these cold wave predictions is that many of them originate beyond the United States, in a section from which it is impossible to secure any data on which to base them. Hence the low percentage, 54.6, of the official specially charged with ordering them, in comparison with those entrusted with weather, wind and precipitation forecasts. A sudden fall of temperature of between 10° and 20° is not considered a cold wave, however widely extended. In the words of Prof. Russell, "A temperature change, to be of importance, ought to exceed somewhat the diurnal range of temperature at the place for the time of year."

The range at Baltimore for March, '89, was 40°, consequently a cold wave would have sent the thermometer down to less than 28°, admitting it to stand at 68°, its average maximum, for that "time of year." The

extent of a cold wave is a fall of 20° over an area of 50,000 square miles, or 10° over an area of 100,000. It is rather remarkable that of the 700 cold waves noted between '80 and '89 not one had its centre at Baltimore, only two at Norfolk, and one each at Washington and Philadelphia. The "cold wave signal" was displayed in Baltimore from November, '89, to April, '91, thirteen times, and justified in seven only.

It is not too much to assert that experience teaches that the cold of March and April is more to be dreaded by farmers than of any other season, as their fruits are then in bloom, and are unprotectable. A belt of tall trees on the south side of them, by raising the winds of either side, and, consequently, the cold, as well as by retarding vegetation, would do much to avert disaster. How far they could avail in newly planted

could not be utilized in time—but in selecting places for new ones there exists in many sections room for it.

Certainly, no class of people need more instruction than farmers in all that relates to their pursuits. Our lands are very sick, and need the very best of prescribers to restore them to their pristine condition, and to adapt them to trucking purposes, to which they are fast being turned.

E.

SHEEP SORREL.

This weed, so designated by the botanists, is not a native of this country, but was brought from England, where its reputation as a pest is of the first order. In this section it has long been known as infesting all lands, the newly-cleared as well as the run down. On low black soils it is plentiful, and with its taste gave rise to the idea that it was the result of "sour land," whose acidity needed correction.

Mr. Lampson, as long ago as 1869, pointed out that it would grow on "limy land," and that if the application of lime did any good at all it was in changing some of the constituents from unavailable to available plant food, thus enabling "bitter plants to grow and crowd it out." For years it has been the pest of clover fields on our light sands, rarely attacking them the first year, but generally the second. Whether the clover has died out during the winter, and been succeeded by the sorrel, seems unknown, and rarely

does it render a whole lot of field valueless. Cold and wet springs are proverbial for its growth in corn lands, where its destruction is seldom completed until its roots can be exposed to the hot suns. As, however, this is about the time it forms its seed and it seems to have less vitality, this may be why it apparently is killed. It confines itself to no land, rich or poor, particularly, and no one manure or fertilizer seems to produce it worse than another. From this it is easily seen that it is the great stumbling block to profitable clover growing.

The following analysis, from the Massachusetts State Experiment Station Report for 1885, will probably be new to some readers of THE FARMER, and its publication may call out from farmers or chemists a plan or method to rid ourselves of the pest if it may be so called.

Potassium oxide.....	19.35
Sodium oxide.....	10.79
Calcium oxide.....	47.53
Magnesium oxide....	8.99
Ferric oxide.....	2.56
Phosphoric acid.....	10.79
	100.00

MEDIUM RED CLOVER.

	Per Cent.
Potassium oxide.....	31.86
Sodium oxide.....	2.16
Calcium oxide.....	31.09
Magnesium oxide.....	12.16
Ferric oxide.....	.66
Phosphoric acid.....	9.00
	86.93

The following analysis of two soils, both sorrel lands, No. 1 a light sand, No. 2 a black gum, are worthy of notice in this connection:

	No. 1.	No. 2.
Silica	88.24	80.02
Per oxide of iron..	10.04	9.25
Oxide of aluminium }		
" calcium.....	0.38	0.59
" magnesium....	0.32	0.43
" potassium... trace	trace	trace
" sodium.....		
Humus	0.60	7.53
Water	0.48	2.08

Dr. Higgins, from whose third report they are taken, says these soils are deficient in chlorides, sulphates and phosphates, and recommends quick lime for No. 2, marl for No. 1; phosphate of lime, Peruvian guano, potash, plaster and common salt for both.

Dr. Lupton, in his "Elements of Scientific Agriculture," gives the following as the composition of a fertile soil that may be used for comparison:

	Per Cent.
Potassium Oxide.....	0.2
Sodium Oxide.....	0.4
Calium " (lime).....	5.9
Magnesium.....	0.8
Iron or ferric oxide.....	6.01
Aluminium " (alumina)..	5.7
Manganese ".....	0.1
Silica (sand).....	64.8
Sulphuric acid.....	0.2
Phosphoric ".....	0.41
Carbonic ".....	4.0
Chlorine.....	0.2
Organic matter.....	97
Loss.....	1.4
	100.00

Supposing that by "organic matter" in the last analysis, "humus" is meant, we see why soil No. 1 may have grown sorrel, but not No. 2. One thing will certainly create some astonishment, the close agreement, nay, most remarkable one, in composition between the "weed" and the soil. The one manured, prized, the other despised and exterminated whenever possible. A. E. A.

FROST.

In September sometimes, in October always, frost may be expected in Maryland. Sometimes it finds the farmer and trucker prepared; very frequently the contrary. Ofttimes it comes unexpectedly, and from no known, or at least observable, cause.

To add somewhat to the certainty of prediction, it may be stated that our mid-day or noon temperature, the time that farmers are usually the busiest, is the period from which we are prone to estimate the probable chances of frost, and is of all others the most misleading. Thus, in October, 1888, there were frost and ice on three dates, with an average maximum temperature of 59° at 2 o'clock or thereabouts. Even the 9 P. M. observations showed little of the coming trouble, the average being 47.3°, and only 38° on one occasion, the other two 51° each. In 1889 frost and ice occurred twice, with an average maximum temperature of 69.5°. In 1890 was noted once, maximum temperature 63.7°, with a 9 P. M. one of 48.6°, but the dew point was 41°. The range of the thermometer, or the difference between highest and lowest temperature, was 41° in '88, 47° in '89, and 41° in '90, an average of 44.3°.

Lest these figures may mislead, we note that the 7 A. M. temperature of the preceding day for 1888 was 41°; for '89, 49°; for '90, 40.7°.

Now, these figures indicate that if we would form even a tolerable estimate of the coming weather, we should notice the 7 A. M. temperature with great care. The long nights are favorable to radiation and evaporation. When to these we add a still atmosphere the danger is increased.

An examination shows that but three killing frosts in this month are to be expected, but they generally have ice with them. In the six instances noted, the frost occurred in five between the 1st and 15th of the month, a noticeable fact worth remembering. x.

SILOS.

The Wisconsin Agricultural Station has issued a very valuable bulletin upon this subject. It notes that silo experience in the United States now covers more than ten years, and so far as the economy of producing silage and the advantages of feeding it are concerned there appears to be everywhere, among those who have operated successful silos, a strong conviction that good silage is a superior and cheap feed; but the same experience is now demonstrating serious imperfections in the construction of perhaps a majority of existing silos in this country. Some silos have so rapidly deteriorated as to become utterly useless for the purposes for which they were intended inside of three or even two years, unless they are subject to extensive repairs, while others have never successfully preserved the materials placed in them. With a view to obviating these difficulties in the construction of future silos, and of suggesting remedies for the defects of existing ones, a study of the actual construction and condition of silos now in use has been undertaken.

Thus far ninety-three silos have been examined by the station; of which seventy are in Wisconsin, six in Michigan, six in Ohio, and eleven in Illinois. Of these sixty-seven are lined or wholly in part with wood; ten are lathed and plastered with water-lime; fourteen are stone, grout or brick, with cement facing, two are lined with metal, and one with tarred paper. Of the sixty-seven silos lined wholly or in part with wood, thirty-four, or more than one-half, showed some rotting at the time of the examination. The oldest of these silos have been filled only five seasons; seven are rotten at the end of the second filling, and one, which was relined at the end of three years, has the new lining rotting after a single year's use. This appears like a dark record for the wood-lined silos, but there is a brighter side when the subject is studied in detail. They have found five varieties of wood-lining now in use, as follows:

1. A single layer of matched boards, of which there are two; one of these is rotting where it comes against a beam in the barn, and the other has been used for one year only. In the latter of these, the silage spoiled a foot in at the corners, and from two to four inches on the sides.

2. Two layers of common boards without paper and unpainted. But one of these was examined, and this was rotting in several places after three years' service. The silage had spoiled to a considerable extent in it, but it should be said that it was

built of cull boards, many of which were worm-eaten and even spongy in places.

3. Two thickness of boards separated by strips of furring laid upon tarred paper. Of the six silos containing this type of lining, their average age being 3.33 years, every one has rotted, two of them so badly as to require extensive repairs before the silos are suitable for service again.

4. One thickness of matched boards with paper on the studding. Thirteen of these silos have been visited, six of which, with an average age of three years, are in good condition still, while seven, with an average age of 3.43 years, are rotting more or less.

5. Two thicknesses of boards with paper between, nailed closely and firmly together. There are forty-five of these silos, twenty-six with an average age of three years, in good condition, while nineteen with an average of 3.4 years, are rotten to some extent.

The rotting which has occurred in most of the cases noted is by no means general, and the conditions under which it has occurred may be thus stated.

1. Rotting where there has been inadequate general ventilation,—eight cases.

2. Rotting where stone walls have been faced with wood,—eight cases.

3. Rotting where boards came against beams or sills,—twelve cases.

4. Rotting where spoiled silage is left piled against the boards,—four cases.

5. Rotting where dirt is piled against or lies behind the lining,—four cases.

Mr. F. H. King who makes the report, believes that the rotting in every case he has thus far observed in the walls of wood silos is attributable to imperfect ventilation, and that it might have been greatly delayed if not entirely prevented by different methods of construction.

Wood kept perfectly and continuously dry, or perfectly and continuously saturated with liquids which do not act chemically upon it will resist decay for generations; while almost any natural wood, containing a suitable amount of moisture and possessing the right temperature, may rot in a very brief period provided only that there be present in it the living spores or germs which develop and multiply at the expense of the wood tissue. The ordinary kinds of wood decay are processes of disintegration due to forms of life which develop from spores and do their destructive work where conditions are favorable, that is, where the temperature is right and the wood is for considerable intervals of time, neither too wet nor too dry. This being true, it is evident that wood-lined silos should be so constructed that all lumber against which the silage does not lie, shall be continuously too dry to permit of decay, while the lining itself should be permitted to become dry, and remain so, as fast as the silage is removed from it. These conditions may be maintained in all comparatively dry climates, by adopting modes of construction which insure very thorough ventilation both of the silo pit and within the silo walls im-

mediately behind the lining; but it may be seriously questioned whether in damp climates, where the shingles of houses are largely moss-covered most of the summer, a simple wood lining can last long in any silo.

It will be readily seen that the type of silo lining, No. 3, where strips of furring on tarred paper carry the boards against which the silage rests, forming closed air spaces, is a mode of construction which must necessarily maintain a damp atmosphere behind and in contact with the lining, and every one of the six cases of this type observed has rotted badly. It will be observed that the rotting in the other cases also occurs where the mode of construction or other conditions are such as to necessitate a very slow drying of the silo lining after the silage is removed.

ORCHARD GRASS—HAY—PASTURAGE.

No one who has ever fed hay or fodder, or ever used fruits, that has not noticed that the feeding value of the one, and the keeping qualities of the other depend to a very considerable degree on the maturity of both. Years ago the analyses of Timothy at different stages of growth showed beyond successful contradiction that its food value as a hay largely depended on the time it was mowed.

Not long since a spirited discussion arose between two correspondents of THE FARMER as to the value of Orchard grass as a hay, in which almost, if not quite, contradictory statement of its value were indulged in. Without recalling the arguments on either side the following analysis of it in various stages of growth plainly assign it a position as a ticklish grass to deal with as hay, and to relegate it almost entirely to the pasture grasses.

Pounds per ton as hay: Protein 230; Fat, 64; Carbohydrates 750; Fibre, 600.

	Protein.....	Fibre.....	Carbohydrates.....	Fat.....	Value.....
Grass 6 to 8 in. high.....	387.8	290	722.1	107.4	\$16.82
15 to 20 in. high.....	317	388.6	738.9	109	15.94
25 to 30 in. high.....	211.5	572.8	875.1	79.1	13.63
Beginning to bloom.....	157.5	506.2	834.3	45.4	12.14
Just out of bloom.....	132.1	581	788.6	40.4	11.56

HUMIDITY TO DATE.—The present season is remarkable for dampness. The growing plants have had all they could take in; the farmer has had more than he wanted to secure his hay and oats in barn or stack. Whether this abundant supply has been produced by tampering with the atmosphere, scientists will have to explain. Having read of it being brought about by explosion, and a neighbor that has been using dynamite to get his rocks into suitable size for building, has been requested to stop until his neighbor had secured their oats, but he did not believe that was the cause, kept on blasting and the oats are most spoiled. That is facts! Besides the old farmers have been setting around waiting for it to clear off until the moss might grow on their rocks. If this thing is kept up and the Farmers' Alliance don't take it in hand and regulate it, we will all be in the "swim" or have to swim to get out. JOHN E. CAKE.

August 7.

LIVE STOCK.

SELECTION OF BREEDING SOWS.

There is no valid reason why a farmer now-a-days should not have hogs that are of a good quality as to form and blood. Assuming that he has he will do best to select his sows from his own lot of young things. The male must necessarily be secured elsewhere, for few farmers keep two families of the same breed. No farmer can afford to in-breed his swine. He who would increase his number of brood sows or replace animals discarded, should have this in mind from the time the pigs are farrowed on up to the time the final separation is made; it is not a work that can be or should be done on the spur of the moment. So many points are to be considered in the make-up of a good brood sow that it is not possible to bring them all under consideration in a few moments. A man may take in the form at a glance, but the disposition and in-born characteristics he cannot. These latter are as important as the former. To know the disposition and probable good qualities of a young sow it is necessary to see her day after day and note her actions, also to know something of the good qualities of her dam, whether she was a careful mother and a good suckler. A man cannot know these things of any other herd so well as of his own, hence a better chance of a good selection from his own herd.

A gilt selected for a brood sow should have good length, but not at the sacrifice of ham, shoulders and back. One that is too long in body is usually poor in ham and shoulders, sway-backed and weak about the heart. With good length should be found strong shoulders, which are most always accompanied with large heart girth. The ham should be deep, round and full, probably the most difficult quality to secure in connection with perfection in the other qualities mentioned. The head is a most excellent index to character and disposition. These qualities in a desirable degree are indicated by the short, broad face, and ear slightly drooping forward, along with short, well-set legs, broad back and strong loins. A sow should have great depth of body, which shows great digestive powers, a quality absolutely necessary in a good brood animal.

The farmer selecting from his own herd will study each promising gilt from birth until final selection is made, which should be done always before the fattening process for market begins. In nearly all instances best results will come to the owner by selecting his breeding stock from spring farrowings, especially the sows. The summer grazing develops them better for their work of reproduction. A larger number should be selected than needed, that those proving indifferent mothers may be culled out, still leaving the desired number.—Stockman and Farmer.

Maple trees in West Chester Pa., are falling a prey to a small green insect, which fastens upon the leaves and by some means causes them to drop, green and fresh, from the trees.

CRACKED HEELS.

Whenever you have "cracked heels" be sure you have defective circulation in the foot. The change in the character of the hoof not only interferes mechanically with the blood vessels, but the functions of the part become perverted so that waste products that ought to be carried off through the natural channels are excreted through the skin where it is thinnest, behind the pasterns, it having become involved in the general disturbance at the extremity. When cracked heels become chronic or break out every time the animal is driven, first clean out and level the hoofs, shoe with a plain shoe and use moderately, then stuff the feet every night with flaxseed, to which add a gill or more of 5 per cent. solution of carbolic acid. At the same time apply a handful of this poultice to the heels every night for a week or more. Always remove it next morning, and apply a little iodine ointment during the day. Or an excellent remedy to use at any time is:

Friar's balsam.....4 oz.

5 % carbolic acid.....1 oz.

Tincture of iodine.....1 oz.

Mix.

Be sure to keep the hoofs soft and growing.

THE DAIRY.

HEAT IN THE DAIRY.

It is the condition of the milk that causes the difficulty, and a remedy which we have never known to fail, is to heat the milk before setting to 135 or 140 degrees. The milk of the farrow cow sometimes thickened and nearly coagulated when drawn from the udder, and the cream is often very difficult to churn, requiring a much longer time, and perhaps yielding only a part of its butter. Now, when the milk is heated as before mentioned, this peculiarity in milk is entirely changed, and it will churn in the same time as the milk of a fresh cow, and no flakes will appear in gathered butter. This will also cause the cream to rise more perfectly, and increase the amount of butter. We have often heated the milk simply because the cows had calved at different periods, and it was found to produce a more perfect rising of the cream and an easier and more complete separation of the butter.

1. In warm weather heating will preserve the milk sweet 24 hours longer, and thus give time for the cream to rise in open, shallow pans; and if the milk from fallow and fresh cows is creamed from cold, deep setting, then the fresh cream is heated to 135 degrees F.; to cause the butter to separate evenly and equally from the whole mass. Heating kills the fermenting germs in the milk, and it will not sour until new germs from the air become developed in the milk.

3. When cows are fed on sour or moldy ensilage, it gives an unpleasant flavor to the milk, cream and butter, but if the milk is heated before setting to 135 degrees, the tainted flavor is all removed; or if the milk is set without heating, then the flavor may be corrected by heating the cream, when perfectly sweet,

to the same temperature, and the butter, will be perfectly free from the tainted flavor. The writer at one time fed clover that was put in the silo whole, and had become moldy at the outside, the cows eating it eagerly, but the milk was so badly tainted that good butter could not be made from it until the milk was heated as above stated, when the butter had not a trace of the bad flavor. Turnip flavor may be removed by heating the milk before setting. But the flavor from onions and leeks is too pungent to be removed by such heating. When cows have been suffering to drink from stagnant pools in dry seasons, the milk is not only injured in flavor but in its healthfulness. If such milk is heated to 140 degrees the ill flavor is dissipated, and the butter made from it healthful. It also frequently happens that cows eat more or less ill-flavored weeds in pasture, giving a disagreeable flavor to milk and butter, but heating is an effectual remedy for this.

4. A higher degree of heat is used by some consumers of milk who fear to use milk from cows whose health and feeding they know nothing about, and to insure its healthfulness they boil the milk before using. It has been found that the milk of cows affected by tuberculosis becomes harmless after boiling. This high degree of heat kills the germs of disease.

5. The milk should be heated in a water bath, instead of direct heat applied to the vessel containing it. A deep circular pan is placed upon the stove, and a few inches of water put into it. Lay two pieces of iron on the bottom, and the cans or vessels containing the milk are set on these irons, surrounded by the hot water. This will heat the milk evenly without danger of scorching.—*Prof. E. W. Stewart, in Country Gentleman.*

PACKING BUTTER AT THE WEST.

For packing either roll or granular butter in brine for long keeping, the following methods are used in the West: Take new pork barrels; fill them with clean water; let the water stand in them, say four days, then empty out the water; rinse clean and refill the barrel, and let stand another two or three days, then empty and rinse clean again. This method serves two purposes; it removes the wood taste from the barrel, and the staves of the barrel are soaked full of water, preventing the brine from soaking into the barrel and leaving the top of the butter bare to the action of the air. Herein lies the success of the process.

Those who wish to put butter down in granular form should line the barrel with parchment paper. Fill the barrel within say four inches of the top; put on a cover that will slip inside the barrel. Every churning of butter that is put into the barrel should be covered with brine, and a weight placed on the cover inside to keep the butter down under the brine.

Granular butter need not be salted before going into the brine, as the brine will keep it perfectly for any length of time desired. We handled three barrels last season; in the win-

ter, when we sold the butter, we handled it in this way every time we churned. After removing the butter from the barrels we put about thirty or forty pounds of the granular butter from the barrels into the churn; turned the churn gently for one minute or so, drew off the buttermilk, washed the butter clean, and, as far as taste or smell was concerned, it could not be told from fresh-made butter. The butter was then salted, one ounce to the pound, worked in the usual way and packed in one and two-gallon jars. Some might think the granules would get quite salt enough, in fact, too much, from the brine. Not a bit of it; brine will not penetrate fats of any kind. Salt merely crystallizes upon the outside surface of the butter, and is easily washed off.

Those who wish to pack in rolls can put the rolls up in two or four pounds, or heavier if desired. Wrap with parchment paper; wet the paper in water before using; tie the paper on with a cotton thread, and submerge it in the brine as soon as made, but butter has to be salted in the usual way when put into rolls. Before going into the brine be sure that the buttermilk is thoroughly washed out of the butter before putting it into rolls. Soft "salvy" butter, partially washed from buttermilk, will not keep under any process. Buttermilk left in the butter is one of the most prolific causes of rancid butter.

The brine is made in this way: Take a good common barrel salt; fill the kettle or pot with clean water, bring it to a boil, then put in salt enough so that the brine will float an egg, and boil it well. Let the brine stand over night to settle. When pouring the brine out of the pot don't allow any settlements to escape. The brine can be made the day before it is wanted. Brine does not have to be taken out of the barrel and reboiled, the same as often has to be done with brine on beef or pork. The barrels of packed butter can be kept either in the cellar or any moderately cool place. The above points are given by a correspondent in *Hoard's Dairyman*.

DAIRY ITEMS.

The following come from *The National Stockman*:

We don't know how thousands of churns have been invented and patented, but there is a vast number and we suppose that every one of them will bring the butter in a longer or shorter time. Of the kinds in use there are but a few and their mechanism is of the simplest; nearly all inside machinery has been discarded, having been found to be worse than useless, and the churn of to-day may be known as a box or barrel-shaped in various styles and working on the principles of concussion by causing the cream to fall from top to bottom or from end to end of the box or barrel. The old idea that cream must be violently agitated by rapidly revolving paddles has been proven false, yet there are many butter-makers now who cling to the dash churn and look with much disfavor upon the modern improvement. A single trial ought to convince those unbelievers, not

only of the merits of the modern churn as a butter-making machine but as a time and labor saver also.

We suppose that of the immense quantity of corn fodder grown in this country not more than one-tenth is utilized for feeding purposes. There may be some excuse for this waste in the West, with its immense corn fields, for there the cost of labor comes in as a powerful factor, preventing the saving of fodder as it is saved in the East; but we think the time is coming when even in the West they will find some better way of feeding the fodder than that of turning droves of cattle into the fields to eat a small and destroy a large per cent. of the standing fodder. In some of the dairy reports published recently in *The Stockman* it will be remembered that the feeding of corn fodder played an important part. For dairy cows some consider fodder equal to hay, and if it is properly cured and fed no doubt it is equal to timothy hay. Many make the mistake of allowing the corn to get too ripe before cutting it; after the grains glaze the corn can be cut and it will make better fodder than if it be allowed to stand till the grain gets hard. The only objection to early cutting is that if hot, dry weather follows the fodder gets very brittle and much of it will be wasted in husking, hauling and stacking.

When the pastures are at their best, and the flow of milk at its greatest, the price of butter is apt to take a downward turn, and the question arises, shall we hold the butter for a better market or sell at once for the best price we can get? To answer this question satisfactorily we ought to know what our butter costs us, what the chances are for a butter market in the future and whether we can keep our butter in good condition until the market improves. It is a good rule in selling all farm crops to sell when the crop is ready for market, and this rule applies to butter, but there are times when the prices are so low that it seems like a waste of money to increase the supply already on the market, and if we can hold our butter, confident that it will keep, it may be the better policy to do so. Those who can put their butter into cold storage need not concern themselves about any other way of keeping it, but those who cannot avail themselves of this method of keeping should try the one described in the *Stockman* of packing the butter while in small grains in brine. This butter can be taken out in winter, churned in buttermilk and then worked as though fresh churned.

A salt-box, says an exchange, may be nailed against a post in the field, with a rain-proof, hinged cover sloping away from the post. The front board is cut away in a half-circle, so that the sheep can see the salt; as they thrust their noses in the lid is raised, then it drops back when they withdraw. Another form which we have used is a simply V-shaped trough, ten or twelve feet long, roofed with a trough of the same shape, only wider and supported on standards far enough above the salt trough to allow the sheep to insert their heads.

THE POULTRY YARD.

PROFIT FROM POULTRY.

There are many poor, run-down farms whose owners are struggling for a bare living, and reducing the fertility of their farms still more, because they are growing corn, wheat and hogs, competing with farmers on rich lands, who can grow double the yield they can, and at less cost. If such farmers ever become prosperous, it must be by attention to the incidentals of the farm, and among them there is perhaps none that offer better chances for profit than poultry. I know that the average farmer looks down upon the "chicken business" with contempt, as little and trifling, "fit for women," but beneath the dignity of a man. I can assure the men who hold such views of the chicken business, that if the care is given it that it deserves, there are many farms on which with half the labor the owners are now bestowing, more cash could be realized from poultry than they are now getting, and the keep of poultry would scarcely reduce the sales of other things from the farm; for it would keep nearly as many cows as though there were no chickens or other poultry on the farm. A good combination of specialties for a poor farm would be poultry, butter and potatoes; for the skim-milk and unmerchantable potatoes would go far towards feeding the fowls; and the manure from both cows and fowls would enable the owner of the farm to keep a few acres of the best land in a high state of fertility.

I am familiar with the business of one poultry farm, on which an average of two hundred and fifty hens, ten turkeys, a flock of Pekin ducks and of improved geese are kept. The policy on this farm is to push all young stock as rapidly as possible and sell just as early as it is marketable, and the sales of poultry products from this farm for a period of five years were over \$3,000 a year, and all the grain, potatoes, cabbage, etc., the fowls eat, is grown on the farm, and as all the manure from the fowls is saved and applied, it enables the owner to grow heavy crops. It is a problem how to keep fowls healthy when a large number are kept, but I believe there is no difficulty about it if rightly managed. First, I would colonize my fowls so as to have not more than seventy-five in one house, and the houses separated a little so that each lot can range over a different area. Second, give attention to cleanliness in the houses. I would make concrete floors and provide a place for a dust bath, and would give a variety of food with but little corn, except when I wished to fatten some stock for market. Lice are at the foundation of nearly all poultry diseases, and to keep the house and fowls free from these, every part of it should be sprayed every week or two during hot weather with kerosene emulsion, and when this is done the nests should be changed and the boxes sprayed.

This kerosene emulsion is made by first making strong, hot soapsuds and adding half a pint of coal oil to a gallon, and churning it with the force pump until thoroughly mixed.

Those who take these precautions escape chicken cholera. I know a very successful poultry raiser who has enclosed two acres and built a house in the center, and he uses light portable fences to divide it into four lots or runs of equal. The whole of it is planted in fruit trees and yields a good income from the fruit alone, and by setting early fruit in one part of the lot, and late in another, by the use of the portable fences he can keep the fowls out of any section where they would injure the fruit. Every fall the division fences are removed, and the entire lot is worked with the disc harrow until a good seed bed is made, and two bushels of rye per acre is sown. The fowls eat much of this rye, but enough comes up to furnish good fall and winter pasture for them, and as soon as the land will work in the spring the disc harrow is put on again and as good a seed bed as possible made and the land seeded heavily with oats. By this plan the fowls have green succulent food during most of the year, and the balance of the time the green food can be furnished them. I think the bane of poultry as ordinarily kept on a farm is that they are fed on corn too much. Corn is so plenty and handy to feed and the fowls like it so well that from fall till spring they have no other grain. I did this myself for many years and got few winter eggs, and since I began feeding scalded bran and wheat screenings, the winter egg product has more than quadrupled. I wintered sixty hens the past winter and the sale of eggs had brought more cash in three months than the hens would have sold for in the fall, and the eggs used in the family would nearly pay for the feed. I buy wheat screenings at half a cent a pound, which is cheaper than any other food I could buy. If you keep a large amount of poultry you can afford to send to the best market, while with but few eggs or fowls to sell you must take local rates. My country seat is but fifteen miles distant, but all poultry products will bring from twenty-five to forty per cent more than in my own village. By holding eggs for a few weeks in the fall the price will often be nearly or quite double, and there is sure to be a rise also at Easter.

There is no product of the farm that has kept up in the price so well during the past few years of low prices as have eggs and poultry, and to-day they are relatively higher than anything the farm produces, and I believe there is fine chance for young men who go into the poultry business intelligently, and manage it on business principles.—Waldo F. Brown in *Mass Ploughman*.

CONFINING FOWLS.

The practice of confining fowls and broilers to fatten is overdone. A great many know from experience that fowls confined in close quarters for more than eight days will lose flesh. There is quite a difference between keeping fowls in small yards and keeping them in small coops or rooms. Try a dozen fowls, weigh them before penning them in the coop, then in seven days weigh them again, and at the end of seven more days weigh them once more. Con-

tinue this as long as you please, but in all probability you will be satisfied on the fourteenth day that they have lost flesh instead of gaining fat.

We all know, or should know that a young growing chick is much harder to fatten than a fowl, and the so called "fattening pen" in the brooding houses illustrated in some of our poultry publications (for indoor chicks) is far more ridiculous than the two or three weeks confinement of fowls, chicks for broilers or for any other purpose, except to raise feathers alone, just for fun. If you want to raise big, healthy chicks, make your runs or yards as large as possible—the larger the chick, the larger the run. You must make bone and muscle before you can put on fat. This will apply to all fowls. A very large run is not indispensable, but you must have an outside run, and the larger it is the better.

Some will say, "It is too cold to let the chicks out in the winter, and the early chicks will be marketed before spring, so what is the use of having runs, as I only hatch out early chickens?" We would say that any day in the winter that is not stormy is not too cold to let the chicks out, after they have learned to go under the brooder. They will run in and out a hundred times a day, get good exercise, and be strong and hardy. It will pay the poultryman to spend a few hours the first few days of each new brood, to see that they do not stay out long enough to get chilled.

You who are worrying along with the "indoor system" make one good run for one brood, and see which will pay you best, then come out in the poultry papers and let others know.—*Sci. Poultryman*.

HORTICULTURE.

A FARMER'S SHRUBBERY.

Don't make a mistake about your flowers and mix things too much. If you wish to enjoy nature do as nature does; have a nook for flowering plants, and have your shrubs in groups. If you can, plant a lawn to shrubs alone. What I mean by a lawn is what folks used to call a yard, only a lawn is a space inside a drive or drives, or brooks, or a separate slope or swale hedged in, instead of being inclosed by fences.

Don't have a fence if you can help it. My shrubbery is inclosed by a drive that divides and goes about it, and then runs together again about the house. It is just whatever came inside that driveway, above half an acre. Some would find it easier to plant their shrubs on one side or a back corner of the home lot, or down a swale or over a knoll. When the shrubs are young they will not make much show, and may have flower beds temporarily scattered about. They should also include some superfluous specimens that can be dug out as the others get larger.

Don't begin by leveling or by grading or by terracing. Nothing looks worse in the country than a smoothed off little bit of a lawn, that looks as if it had been picked up in the city at auction and dropped down by your door. Keep all your property equally clean and pleasant, and not have one yard or lawn fussed over and worked on constantly while the rest of your farm looks bewitched

with brush, and stones, and stumps and general neglect.

About shrubs, begin by collecting those that grow wild in your own section. There are some very fine native shrubs in every section of the United States. Hereabouts I can yet find wild cherries, sumac, leatherwood, witch hazel, hopple bush, berberies, dogwoods, etc., all very fine. Horatio Seymour insisted that the elder bush was one of the finest bushes in existence. He was right, when it is well grown. Add always your native evergreen bushes.

Next collect such native trees as will bear to be grown as shrubs or bushes. Do you know what I mean? Most lawn planters do not know that tulip trees, lindens, acacias, beeches, catalpas will bear to be cut back to the ground, so that they will shoot out a dozen stems instead of one trunk. Grown in this manner with annual cutting back, they make delightful bushes, and many of them bloom profusely.

Thirdly, collect from your neighbors the old-fashioned bushes such as syringas (mock orange), lilacs, spiraeas, etc. Then you can begin to purchase. Now I will give you a list of what I think the finest shrubs that can be obtained anywhere, and grown in our Northern States. Send first of all for a half dozen catalogues. Then select what you desire, and pay honest prices and get what you buy. But if any one sends a catalogue that paints the town red with extravagance don't trust him.

1. The finest shrub in existence is an evergreen native, the mahonia. It is a wonder; fine all-winter for cutting, blossoming in great golden balls in May, the young foliage coming out rich crimson, turning to green. But this shrub must be planted out of sight of winter sun, in a northeast angle of the house, or it must be covered with evergreen boughs or litter.

2. One of the most useful of all shrubs is the bush honeysuckle in several varieties. Some of them are originally from China, others are native. The red, pink and white are desirable; entirely hardy, rapid growers, immensely profuse in bloom, and are easily made to form superb hedges.

3. Of the lilacs every one should have the common white and purple, the Chinese, the Persian white and Persian purple, the Rothmagenensis and Josikea. There are easily obtainable thirty or forty sorts.

4. Berberry. The sort called vulgaris is finest. It is a native of England, but is now often found in our woods. It is not only fine in flower, but superb in fruit all winter. It is the glory of November and December. Give it moist soil on a cool spot.

5. Several of the dogwoods are grand. The Cornus Florida is a small tree, and is hardy up to Southern New York. Its magnificent clusters of bloom are unequalled in small trees. The red-barked dogwood has its bark green till the leaves fall, after which all winter the bark is vivid carmine red. It spreads into great bunches in damp spots and glows like a fire on the snow.

6. The Japan quinces are of three colors in blossom. The flowers are

very attractive, covering the whole bush with scarlet or pink or white. They flower in May.

7. The weigelas are superb. You cannot get anything finer than these three sorts, candida, white; rosea, rose colored, and the superb variegated-leaved variety. Flowers are large, profuse, lovely. They flower after the lilacs.

8. Rose of Sharon or Althea, or as it is sometimes called, Hibiscus. These are by all odds the finest, longest blooming shrubs, continuing for two months. They are superb and in many colors. The Variegated leaved Althea never opens its buds, but the foliage is fine. These bushes are delicate when young, but if protected for three years will prove very able to care for themselves.

9. A rare but excellent shrub is *Exochorda grandiflora*. It blossoms in May all over in large, white flowers. Don't fail to get it.

10. The best *dydrangea* is *paniculata*. If grown to a single stalk in good soil, gets to be ten feet high and as many through, and in August will come out on the end of every twig with flower panicles as big as a baby's head. It is truly noble.

11. Mock Oranges. Get all the sorts you can. It is a delicious flower: always white, sometimes single.

12. The best purple-leaved shrub is *Prunus Pissardi*, a Plum that bears small flowers and fruit, but the leaves are exquisite. The next best colored shrub is the purple-leaved *Filbert*.

13. For a very early bush the Yellow-flowering Currant or *Ribes* is excellent. It blooms very soon after snow, and is covered with yellow, highly perfumed flowers.

14. Of the *Spireas* select *Callosa* with pink flowers; *Prunifolia* covered with rosette of white; very early; *Reevesi*, and as many more as you can afford. They are fine, and some sort is always in bloom.

15. The Snowball (*Viburnum*) also High Bush Cranberry, a single flowering sort, and the new Japan *Viburnum* all grand.

16. The magnificent bushy *Magnolias*. Two I see that I have omitted that ought to be inserted, the Double Scarlet Plum and the Fringe tree, both magnificent.—E. P. Powell in *Popular Gardening*.

PLANTING SHRUBS.

Many complain of losing shrubs and large plants received by express, as all the soil is taken from the roots before they are sent. Don't wait until the shrubs are received before you prepare the bed for them, but as soon as the order is sent make preparations for them. Do not only remove the top soil where the shrubs are to stand, but spade the whole bed deep and add a liberal quantity of well-rotted manure and leaf-mold (if it can be obtained) and mix thoroughly, and when the shrubs arrive plant the same as you would young fruit trees. Notice the mark showing how deep they were planted before, and prepare to set them a little deeper this time. Wet the roots in a bucket of water. Dig the holes deeper than the roots require, and pour in water, so that the ground below will be moist many inches. After the water settles place some

manure in the hole and over this an inch or two of soil; lift the shrub from the bucket of water and gently lay the wet roots in position, being careful not to break the fine tender roots, as they are just as important as the large ones; after they are all arranged as nearly as possible in the same position as they were before, sprinkle fine soil over them, and then fill up the hole with the soil, pressing it down very firmly about the roots. Now cut back the tops in the same proportion as the roots have been disturbed or broken, and water freely. I have found this method perfectly satisfactory, and out of forty-two hardy flowering shrubs, planted in one year, only two died, and they were very frail, sickly-looking little affairs when they were received by express with several large ones.—*Vick's Magazine*.

FARM OUT-BUILDINGS.

The first thing for a farmer to do is to determine what out-buildings he needs, and can afford, then he should locate them so as to harmonize, and not mar the appearance of the premises, and at the same time be easy of access. The following out-buildings are needed on every farm: A good wood or coal house, one or more hog houses, one or more poultry houses, a privy, a carriage house and a work shop, which may be, if desired, under one roof. Other buildings may be needed, as, for example, an ice house, a dairy house, a smoke house (but since the introduction of liquid extract of smoke in my neighborhood, smoke houses are at a discount), and a building in which to store agricultural implements, which is best remote from the barns, so as to be safe from fire in case the barn burns. One point I would impress, is, that all buildings should be substantially built, and of good material and finish. The difference in the cost of rough and dressed lumber is small, and paint is cheap, and not only adds to the appearance, but also the durability of buildings, and I would cover all buildings with dressed lumber and paint. See that every building has a good foundation, one that will not settle and get it on a twist. A perfectly solid foundation can be made for some buildings by bedding boulders in gravel, or in localities where stone and brick are costly, the foundation may be of concrete. In this article I will tell how I make a hog house, and will describe other buildings in my next. After building six hog houses I have settled on a narrow house, and the last four I have built but eight feet wide, as I find this width will accommodate all the hogs. A house eight feet wide and sixteen long will furnish ample room to fatten ten large hogs, or will winter twelve to fifteen store hogs, but it should have a yard or outdoor pen, eight by twelve feet, also floored with concrete, and this floor should be from eight inches to a foot lower than that of the house. This out-pen is necessary for the hogs to go out in for sun, air and exercise, and it enables us to keep the feed floor clean, for it can be cleaned and thrown on to the lower floor, and the hogs will learn to keep the eating and sleeping apartment clean. If hogs are allowed to get out on the

ground they soon make a foul smelling slough, which is a nuisance to the neighborhood, but with the outer pen floored, and supplied with some good absorbent, it does not become offensive, and a large amount of valuable manure can be saved in a year. The first thing to make is the floor; excavate to the depth of eighteen inches, and fill with stone, cinders or coarse gravel, to within four inches of the top. Then put in three inches of concrete, made with six parts of screened gravel or finely broken stone, three parts of clean, sharp sand, and one part of Portland cement. The gravel or stone should be wet by throwing water over it on the wheelbarrow, and allowing all to drain off that will, then mix the sand and cement as thoroughly as possible, and sprinkle with a fine rose watering pot, to dampen it so that it will retain its form when pressed in the hand. Now mix the cement and sand with the wet gravel or stone, and shovel it over four times to insure so thorough a mixing that every pebble will be coated; spread and ram down until the moisture comes to the surface and it is perfectly solid. Next put on the finishing coat or liquid stone, half an inch thick. It is made by mixing three parts of clean, sharp sand with one of the cement, and spreading it smoothly with a trowel. It must not be disturbed after it begins to set, and must be protected from the sun and drying winds for ten days. It is best to sprinkle with water daily and keep boards over it. The square and spirit level must be used to get it right, and on this foundation any one who can saw a board straight, and drive a nail, can build the house. No sills will be needed, but the corner posts, four inches square, are set directly on the floor and a two by four or two by six joist is notched to the bottoms of the posts and spiked fast. These joists rest with the edges on the floor and extend all around the building. A similar joint is spiked to the tops of the posts both front and rear for plates, and the end rafters are set so that the tops of the boards are nailed to them and the bottoms to the joists which take the place of sills. The nail ties between are ship-lapped on, and the building boarded up and down. I like a good pitch to the roof and recommend that the front posts be cut four feet longer than the rear ones; five feet at the rear and nine in front makes a good height, and one can stand up straight in the house to clean it. About 200 feet of lumber will be required for the frame, 350 feet of siding, and 155 feet of sheathing to nail the shingles to, or say 700 feet of lumber in all, and less than 1,500 shingles. Two men can very nearly build it in a day. If quite an amount of room is needed, two of these houses can be built twenty-four or even thirty or thirty-two feet long, and set facing each other, eight or ten feet apart, and then by roofing this space a large loft is made.—*Waldo F. Brown, in Practical Farmer*.

THE FARMER'S LIVING

Represents Much Value

It seems reasonable to say, why can not the farmer, like other men, devote his time to specialties and buy other things he wants of those who

make a business of producing them? Within proper bounds, I think this is sound, says Mr. W. I. Chamberlain in the *Ohio Farmer*. But we must not forget the entire cost, of exchange, which includes cartage, freight and commission both ways; and lack of freshness in perishable things. For example, shall I raise or buy my garden stuff generally? I say, raise it; first, because farmers will not have or eat it unless they raise it; and second, because even if they would, most of it would cost more, really, and not be so fresh. My 24x5 feet of lettuce and radishes under glass, and as much more outside, grown as I grow them, supplies us for eight weeks or more (about May 1st to July 1st usually) with a great abundance of both these healthy relishes, fresh, tender, crisp and delicious. The seed cost twenty cents. A few feet of old but good lumber and an hour's time made the frame of the little hot-bed, two wheelbarrow loads of manure help give it warmth, and an old double sash of a window covers it and retains the warmth generated by the manure and admits and holds the heat of the sunshine. The little hot-bed is near the kitchen door. What we use in ten weeks would cost at least ten dollars at the village "green grocery," besides the time and bother of getting the wilted stuff from the market, one or two days old, and loaded down with city commission, express charges and retailer's profits. We must not forget that poorer quality and bother in getting from village market are a part of the "cost of exchange."

Ten dollars will not buy the quantity of green peas we use in eight weeks (usually about June 15th to August 10th), four varieties, six different plantings. They are picked fresh, not too ripe, not wilted as they would be if bought, and tender and delicious, as they would not be if bought. The same, in substance, is true of rhubarb, asparagus, spinach, cucumbers, string beans, lima beans, tomatoes, beets, parsnips, sweet corn for eight weeks, and to a less degree, perhaps, of strawberries, raspberries, blackberries and grapes. I began more than twenty years ago the successful raising of the most of these things, though, during the past ten years change of location has at times somewhat interrupted, except the annuals. They can always be grown if you are there in the spring-time and have land for a small garden. The "cost of exchange" on nearly all these things is enormous, in time, money and wilting—i. e. lack of freshness and fine flavor.

THE AMERICAN FLORISTS' SOCIETY.

The meeting of the Society takes place at Toronto, Canada, on the 18th to the 21st of September. There will be the usual reduction of railroad rates to a one and one-third fare. Programmes of the meeting and other information desired may be obtained from the Secretary, Mr. Wm. J. Stewart, Boston Mass., to whom also the membership fee of \$3.00 should be remitted which will give the member all the rights and benefits of the Society such as reduced rates, admission to all its meetings, etc., etc.

The American Farmer.

"O FORTUNATUS NIMIUM ES, SI DONA NORINT
AGRICOLAS." - - - - - Virg.

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Maryland Horticultural Society.
Maryland Dairymen's Association.
Maryland State Grange, P. of H.

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BALTIMORE, AUGUST 15, 1891.

MESSAGES OF CONDOLENCE.

We think we will be pardoned for
putting into type, that they may be-
come a permanent record, the fol-
lowing expressions of sympathy,
which, in addition to many others
from friends which would have no
public interest, were received on the
occasion of the death of Samuel
Sands. Besides these, a great num-
ber of papers throughout the State
and country have made reference in
most respectful and kind terms to
the close of a career so prolonged
and so useful:

General Agnus, the publisher of
the *Baltimore American*, on receipt
of the information of Mr. Sands'
death, sent the following telegram.

*William B. Sands, Hollins Sta-
tion, N. C. R. R.:* In the death of
your father the nation loses one of
its landmarks, for it was he who dis-
tributed the melodious echoes of the
great national song that inspired our
then young soldiers to heroic deeds.
Imbued with all the fervor of the
author, Key, he soon placed to type
the inspiring words that were at
once revered and cherished by the
people, until every throat re-echoed
its melody, feeling from the soul
that in that song shone the real
dawn of our American liberty. The
grief is not yours alone, but is a na-
tional one.

FELIX AGNUS.

On the occasion of the funeral the
General sent a magnificent floral tri-
bute of rare beauty and artistic de-
sign, consisting of a low pillar bear-

ing a plaque on which was displayed
a national flag, composed of rare
blossoms, and bearing on a card the
following inscription:

"He lived to see the song that he
set in enduring type become the an-
them of a great nation. Her battle
song in time of war, her joyful psalm
in time of peace. He lived to see
forty-four States typified in the blue
field of that 'Star Spangled Banner,'
and lived to see it wave over a united
country, the home of liberty, the
marvel of the world."

*William B. Sands—MY DEAR
FRIEND:* I am sure you will not
consider it an intrusion for me to
write a few lines of sympathy on the
occasion of your father's removal
from this busy world (in which he
did such a useful part) to the higher
existence in the great hereafter.
He passed away "full of years and
full of honors." He lived to see his
teachings bear rich fruit. The seed
sown in the old FARMER has borne
a hundred fold. Few men have had
such an opportunity of benefiting
agriculture, or have so fully availed
themselves of it. As a boy I re-
member the pleasure with which we
welcomed each number of his jour-
nal. And what friends he had! Col.
Capron, Roger Brooke, Calvert, the
Goldsboroughs and Tilghmans, my
own father, Benjamin Hallowell,
and many of the pioneers in ad-
vanced agriculture! It can be said
of him, truthfully, that "he left the
world better than he found it."

With kind regards,

Yours truly,
HENRY C. HALLOWELL.
"ROCKLAND," SANDY SPRING, MONT.
Co., MD., Aug. 1, 1891.

[Telegram.]

CUMBERLAND, MD., July 29, '91.
William B. Sands, Baltimore:
In the death of your father Mary-
land loses a most patriotic son and
the farmers a good friend.

LLOYD LOWNDES.

THE MOUND, HARFORD Co., MD. }
P. O. JERUSALEM MILLS, }
July 30, 1891.

My Dear Sir: In yesterday's *Sun*
I noticed an account of the decease
of your venerable father. Permit
me to express to you my sincere con-
dolence for the loss you have sus-
tained. I often recall to mind the
long and most agreeable intimacy
that existed between us when we
were associated together as members
and officers of the old Maryland
State Agricultural Society, during
which time naught ever occurred to
disturb the unanimity which always
existed between us in the discharge
of our duties, and no act of mine
ever gave me more satisfaction than
the suggestion that a testimonial
should be presented to him for his
untiring devotion to the interests of
the society, and which met with a
most cordial and hearty response
from the members.

After having lived far beyond the
period allotted to man, he has at last
passed away, doubtless to receive the
reward of a life during which all the

duties imposed upon the true and
consistent Christian were most faith-
fully and zealously discharged.

With great respect,

Very truly yours,

JOHN CARROLL WALSH.

To Wm. B. Sands, Esq., Baltimore.

RALEIGH, N. C., July 29, '91.

I have just seen a notice of your
father's death, and take the first op-
portunity to tender my sympathy.
Instead of condolence, however, I
feel that I should congratulate you
upon the rounding up of a life fully
completed and the precious posses-
sion of such an example. We may
well grieve when our friends are cut
off in early life, but there is a gran-
deur in a life completed and only
laid down when its tenement is com-
pletely worn out that excites our ad-
miration.

Yours truly,

W. F. MASSEY.

N. C. College of Agriculture.

I have just seen in the papers the
announcement of the death of your
father, venerable for his years, re-
spected and esteemed for his useful-
ness. If he "who causes a blade of
grass to grow where none grew be-
fore" is to be esteemed a public ben-
efactor, what shall be said of him
whose whole life was spent in the
effort to teach a whole class how to
grow more cheaply and economically
than ever before? A minister of the
gospel dies full of years, who by his
books and his ministrations has
sought to make a few congregations
and readers wiser and better, and we
mourn his death, although he has
passed the age that the inspired
book, whose teachings he has so long
and ably enforced, declares that the
appointed limit has been reached
and passed. But what shall we say
of him whose monthly and semi-
monthly utterances have been given
for half a century or more? Not
only the hopeful ones of youth, the
mature ones of manhood, but those
weightier ones that fall from one
that feels he stands on the brink of
the dark river, and that for them all
he must be judged.

Forty years and more have I
known THE AMERICAN FARMER,
with which his name must ever be
associated, and its course has ever
been wise and conservative, contain-
ing little to harm but a vast deal to
instruct, to encourage, to raise the
farmers of the land not only in their
own estimation, but in that of those
with whom they might be brought
into contact. It is something to be
proud of to have had such an ances-
tor; something to nerve one for the
great battle of life; something to
strive for that when our work is over
our end may be like his—one of hon-
ored usefulness. Accept the assur-
ance of my great sympathy for your
loss, one that I almost feel to be per-
sonal.

Your friend,

ALBERT E. ACWORTH.

Wicomico Co., Md.

I see by the *Evening Star* a notice
of the death of your most worthy
father as occurring this day. You
have my deepest sympathy in your
irreparable loss. Though in the
wise and natural order of some great
law, and anticipated by you for many
days, it nevertheless comes as a great

pall of sadness in the parting from a
living and beloved father. Time
alone can soften the keen anguish of
your grief and bring unto you as a
sweet incense his many remembered
acts of a noble, useful and well-
spent life. GEO. H. CALVERT.
WASHINGTON, D. C.

I write to offer my sincere con-
dolence in this your hour of severe be-
reavement. There were few men in
all my acquaintance whose name I
held more dear than that of your
father, and the recollections of him
will be treasured by me, for it is in-
deed a great privilege to be permitted
to say "I enjoyed the friendship of
Samuel Sands." But you all should
feel a just pride in the knowledge of
the fact that he had lived a long life
conspicuous for honorable deeds.
And it can be fitly said of him that
there is no condition in this world so
heavenly as the serene sunset of a
well spent life.

Very sincerely your friend,

THEODORE F. LANG.

BRIGHTWOOD FARM, July 29.

Dear Mr. Sands: I am grieved to
see by to-day's *Sun* that your dear
father has passed away. You have
my sincere sympathy. I have so
often lately passed through the fur-
nace of affliction that I know full
well the bitterness of its cup; even
now the shadow of death is hovering
over my home. It must be some con-
solation that the father's life was so
fully rounded out in years, useful-
ness and honor. He has for years
been so closely associated in my mind
with my dear husband, their birth-
days being the same and their ages
differing only by one year, that his
passing away touches my own pain
afresh. You need, therefore, no
further assurance that I sorrow with
those who mourn his loss, and be-
lieve me

Very sincerely your friend,

HANNAH STEIGER.

To have loved and lost is sorrow
unspeakable. Human sympathy
however sweet does not avail, since it
cannot bring back our loved ones.
Even the thought that the Master
knows and cares seems at times very
far from us. To live over again the
old days, holding each tender mem-
ory close to our hearts, will help us
feel that though dead they speak to
us, live near us, watch and wait
until we, too, shall pass to life eter-
nal, for death can make no breach
in love and sympathy, in hope or
trust. No outward sign or sound may
reach our ears, but there's an inward
spiritual speech that can greet us
still, though mortal tongue be silent.
It bids you do the work that he laid
down, take up the song where he
broke off the strain, sojourn until
you reach the heavenly town where
are laid up your treasures and your
crown, and your lost loved one will
be found again. Until the evening
going out to reap; then like an infant
sinking into sleep. Loving, tender,
true, faithful, honest—will not this
record speak peace to your heart?

In tender sympathy,

JEANNE DOS PASSOS.

A FARMER'S EDUCATION.

Farmers, as a class, lead isolated lives, and there is no help for it. A half mile to and from a neighbor's, after a day spent in the fields after the plow or harrow, means more than appears on its face. A acre of ground is considered a fair day's work, or seventy yards square, or 2,520 inches each way. Now, supposing a plow to turn a furrow 12 inches wide; 210 furrows, each 70 yards long; 70 yards are 210 feet. Then 210x210 equal 44,100 feet that he must travel, leaving out the additional steps he must take going to and from it and in turning at the ends to plow it, or over 8 miles. If he harrows, then we have 104x70, equal to 4 miles, and this every day, save Sundays, for at least 50 days in every year. The same is more or less true of the whole year with farmers, being one of travel.

This is tiresome, and when night comes, indisposes them to visiting. Thus they are thrown on their own resources, and must cultivate their own, to the utmost, else their life becomes a very tedious, tiresome affair.

Now, education trains us to make the most of small things. Burrit, Miller, Henry and others made the most of a very slender education. Had farmers a wider education, one teaching them the leading principles of their pursuit, they would have a foundation on which to build. They are concerned with the effects of foods, yet their physiology does not give them the technical name for them as they are found in any farm journal. A perfect ration is one in which the quantity of muscle-forming to heat-producing foods is the best for the purpose and the health is given, but you will fail to find it in the "Human Body," the text book of the schools.

Year after year sees the fruits and the fruit tree foliage destroyed by insects of whose name, let alone habits, he is unacquainted, yet the names of geographical places, that no one here knows or even cares to, is dinned into his ears at school until he comes to despise them.

He plows fields full of weeds, sheep-sorrel for instance, utterly ignorant that it is rich in potash and phosphoric acid. He cultivates corn and wheat from youth to old age without knowing that they require very different manures, and that corn grows on poor land from its abnormally long roots that enable it to reach substances inaccessible to the shorter ones of wheat. Yet thousands of farmers do not know or appreciate the fact, never having seen it mentioned. Largely to this is due the extraordinary crops of corn grown on sandy land in proportion to strength of soil—sheep-like, it is a good feeder wandering widely in search of food.

Collision of mind invigorates, expands, opens new trains of thought. Farmers are prone to question the utility or profit of their neighbor's deviation from the beaten track; they are not half so quick to question, or adopt the better plans they see in papers and journals, because they have not been taught to observe, to criticize, to judge—they doubt their ability to do so.

A man who has never seen a reaper, a self-binder, or a steam

thresher, fails to grasp the important central idea that time is the controller, because it is weather that makes or mars a crop—hours being days, and they bringing gain or great loss.

Start your son to-day, or your daughter either, with your experience and a mind trained to observe, compare, analyze, and give him your age, and where ought he or she to be?

There are hopes, however, brilliant hopes for the future. In every walk and pursuit, save farming, men are bending every energy of their minds to the accumulation of wealth. Every day witnesses a triumph, as shorter roads, faster engines and boats, the telephone and the telegraph substantially annihilate space, and new machines take the place of hand—when parts can be had as wanted, being "kept in stock," and each day sees him who will not use his mind passed in the race, and each and every day poorer, poorer, the old paternal acres with the bones of sires, the property of strangers.

Necessity is a miserably rough, uncouth teacher, but she is a good one. All over the land, in the grange, in farmers' alliances, in agricultural societies and fairs we see signs of coming life—they are educating the farmer.

THE WORLD'S WHEAT CROP.

The London Financial Times, in an article on the world's wheat crop for the present year, figures the net shortage at 50,000,000 bushels. From estimates largely derived from Government statistics the crop of Great Britain is placed at 64,000,000 bushels, and the necessary importation at 150,000,000 bushels. In France a crop of 240,000,000 bushels is all that can be looked for, and 100,000,000 bushels will be required. Italy must import at least 40,000,000 bushels of wheat, and the rest of Europe, including Holland, Belgium, Germany, etc., will require in all about 85,000,000. The other importing countries of the world usually require about 30,000,000 bushels, so that the probable demand during the year ending July 1, 1892, may be placed at 405,000,000 bushels.

Against this demand the supply from the exporting countries of the world, outside of the United States, Russia and India, cannot be more than 105,000,000 bushels, leaving 300,000,000 bushels to be supplied by the three great exporting countries. The present outlook is that the United States, Russia, and India, will be able to supply 250,000,000 bushels, and that 300,000,000 bushels will be wanted.

TOBACCO STATISTICS.

The Government Report Internal Revenue reports cigars made in the fiscal year, 4,474,892,767, and increase of 387,002,784 for the year, paying taxes of \$13,424,678.30. The whole income from tobacco is \$32,706,270.97, in detail as follows: Cigars and cheroots, \$13,424,678.30; cigarettes, \$1,345,269.38; snuff, 726,156.89; chewing and smoking tobacco, \$17,080,631.17; special tax dealers in leaf, \$9,155.06; dealers in manufactured tobacco, \$201,532.31;

manufacturers of tobacco, \$598,75; manufacturers of cigars \$9529,73; peddlers of tobacco, \$1,724.38. Total, \$32,796,270.97; same last year, 33,958,901.06. The decrease is on the lessened taxes on dealers and chewing and smoking tobacco, this last falling off \$1,244,850.19. The trade papers try to make it appear that the removal of the prohibition upon the farmer's selling his crop to whom he pleases thus affects the price. So they want to again prohibit the sales of the farmer for the sole benefit of the rich manufacturers.

AMERICAN POMOLOGICAL SOCIETY.

The twenty-third session of the American Pomological Society will convene in Washington, D. C., September 22, 1891.

It is expected that this will be one of the largest and most interesting gatherings in the history of the Society. Papers are being prepared by some of the best practical and scientific minds of the country upon the subject of pomology in all its departments, including entomology and other kindred sciences relating to fruit growing. Particulars may be obtained from the Secretary G. Brackett, Denmark, Iowa, or from the Treasurer, B. G. Smith, Cambridge, Mass.

PROHIBITION OF RYE EXPORTS FROM RUSSIA.

The dearth of grain in Russia promises to be so great that an ukase has been issued forbidding the export from the country of rye and rye meal of every kind, and a great excitement has been produced by the action of the government in Berlin and other European markets.

Referring to the agitation on the Berlin bourse in consequence of the Russian ukase, the *Allgemeine Zeitung* points out that Russia's contribution to the corn markets of the world has varied in quantity to a remarkable extent during the period of the last twenty years, but that owing to greater facilities for intercourse the reduction of the Russian supply has been covered by the products of other countries. "America," continues the *Zeitung*, "is now able to replace Russia, while India, Roumania, Austria and Hungary could also be relied upon for supplies. The Russian measures have been taken at a favorable time for Germany, as the crops have already been or has been gathered." The *Zeitung* doubts whether Russia will maintain the prohibition long in the face of the financial sacrifices entailed, the fall of the ruble notes and the damage which the measure will cause to farming interests.

HOME DEPARTMENT.

The What To Do Club.
OUR MOTTO.

Do what you can,
Not what you cannot;
Not what you think ought to be done,
Not what you would like to do.
Not what you would do if you had more time
Not what somebody else thinks you ought to do
But, do what you can.

FOR fear our club may become utterly demoralized, I will send my mite, although, as no doubt is the

case with the other members, I am very, very busy. Does the world know, I wonder, what a hard-worked band we country housekeepers are? It seems to me no one is exempt. If our families are small, our farms and herds are large; or else our circle of friends brings up the proportion and we must work hard to get our pleasure out of our friendship.

I heard a good thing the other day but I am almost afraid to breathe it, as it sounds so inhospitable. A city woman, who had longings for a country home, had misgivings as to her ability to maintain it as she would be sure to have so many visitors. A frugal sister suggested the "ginger jar" as a means of helping out, and we all voted it a happy thought. We like our friends with us but there are always delicate stumbling blocks in the way of their becoming boarders—and little offerings though they are pleasing and costly, do not help to pay the bills, which are inevitable. So what is one to do about it. If anyone does not know the history of the "ginger jar," read Stockton's "Mrs. Leeks and Mrs. Allshine." It is good reading for hot weather. This is a painfully practical age and the struggle between hospitable intent and the ability to maintain it can not be ignored. Even if we can make ends meet we still have the servant trouble to contend with. The best of servants give out when we need them most, and even poor ones cannot be had for love or money just when they are wanted. Thus do our troubles double upon us when we are trying to get some pleasure out of life.—HELEN BLAZERS.

WHERE do the mosquitoes come from has been asked over and over again for weeks past, and no one has been able to answer it, as we have no rain barrels, no pond near us, and the grass has been cut all around us and we have the barnyard cleansed and limed. I think I have the bull by the horns at last. I found this morning that the gutters along the edges of the house and verandas were all somewhat clogged by the droppings from trees, which had accumulated around the wire shields that are placed in the tops of the down spouts to prevent the spouts from filling. I had a bare-footed boy go around, and with his fingers clean all of them and let the gutters run dry. If this don't oust Mr. and Mrs. Mosquito and the little Mosquitoes I give it up. I thought the hint might be good for someone else.—DOROTHY DOOLITTLE.

I HAVE just returned from a walk over on the Shale-bed, and through the sage brush, buck brush or some other kind of brush, have picked up a number of pretty bright specimens; found a pocket of coal and some gypsum and saw many things to wonder at and admire.

Long years since, when talking with a friend about making our home in the west, he said: "one thing you will miss, the pleasant walks you have been in the habit of taking; the prairies all look alike." Partly this is true; they are treeless grassy plains, yet I find the western states in which I lived differ from each other as much as the Eastern ones, each having its peculiarities

and points of interest, and Kansas is no exception.

Her shale beds, her petrified fish bones, branches of trees and slabs of wood where not a tree now exists, her deep ravines, her yellow clay banks, her shallow rivers, her dark creeks, her building rock that any ingenious boy can whittle with his jack knife into match safes, paper weights and many other little useful articles. The mirage converting fields of grain into forests of lofty trees and making one feel sure that there must be water rippling and sparkling in the sun. These and many other things were new and interesting sights to me a few years ago.

I must leave unsaid many things I was going to talk about or I shall tire you all out, so will only speak about the specimens I found to-day. What are they? and how came they here? Some think they fell in a meteoric shower, others say they are "blossoms" drawn by the atmosphere to the surface indicating the presence of some kind of ore. Editors are supposed to know everything, so I will send some of them to him perhaps he can enlighten us on the subject. I shall not think it a trouble to send specimens to any of the sisters who would like to have them if they would pay the postage. My postoffice is Goodwater.

A word about the crops, and then I will go. We haven't had any occasion this season to sing, "I look away across the plains and wonder if it will ever rain;" the heavy dew and abundant showers have made small grain and early garden stuff a success with us at last. Cane is looking well; it is too soon to tell how the corn will turn out.

LOUISA FUNSTON.

Gove Co. Kansas.

HOURS OF EASE.

HOME.

A little room with scanty grace
Of drapery or ordered ease;
White dimity and well-scrubbed boards—
But there's a hum of laden bees
And sunshine in the quiet place,
And scent that honeysuckle hoards.
Outside, the little garden glows
With sun-warmed leaves and blossoms
bright;
Beyond lie pasture, elm, and wood
Where trail the briony and wild rose,
Where grow the blossoms of delight
In an inviolate solitude.
Through that green land there blows an air
That cools my forehead even here
In this sad city's riotous roar;
And from that little room I hear
The echo of a life-long prayer,
And the world's voice is heard no more.
—E. Nesbit in *Leisure Hour*.

DOMESTIC THUNDERSTORMS.

We have heard it asserted that a quarrel now and then in a family is not a bad thing—that it purifies the domestic atmosphere, rendering it pleasant and salubrious for some time to come; in short, that it is to the household air what a thunder-gust is to the general element.

Who reasons thus is a simpleton. Eye-lightnings are neither agreeable

when the "sparks of fury" are being projected, nor as they flash through the recollection, and tongue-thunder reverberates through the memory for many a long day after the storm. It is an egregious mistake to suppose that sharp words spoken in anger are soon forgotten. They often cut deep, and in some cases the wounds never entirely heal. Crimination and recrimination was never yet freely and frequently indulged in by man and wife without begetting enmity between them, or, to say the least, without destroying their esteem for each other.

Marriage does not change human nature and it is not human nature to love anybody one is continually quarreling with. Pettish wives and surly husbands are advised to make a note of this; also all happy pairs fresh from the altar who desire to keep happy.—*Ledger*.

HINTS AND HELPS.

AMMONIA AND BORAX.

The uses of ammonia and borax are manifold, and their value as household agents can scarcely be over-rated. In the laundry bath and kitchen, they are growing positively indispensable to the progressive housekeeper. The first is a valuable cleanser, and disinfectant at the same time. By those who wish to do their work in the quickest and most effectual way, these remarkable facilitating agents are employed. As toilet articles they have no superior. A little ammonia in the bath will keep the skin healthy, deliciously sweet and clean, firm and fresh looking. It is found in many shampoo mixtures, and is a thorough cleanser of the hair and scalp. Borax water is also excellent for washing the hair. Many prefer it for the face, as it renders the water very soft and leaves the cuticle smooth as velvet. Weak ammonia water will clean hair brushes very rapidly and keep the bristles white and stiff. Weak borax water is a good dentrifice.

Almost every housewife who has inclination toward window flower culture knows the efficiency as a fertilizer of a few drops of ammonia put in the water twice a week for plants. A tablespoonful of household, or prepared liquid ammonia to a pailful of water in which flannels are washed will keep them as soft as when new. It is also an excellent cleanser and whitener of white cotton goods. Borax is a valuable agent in keeping the color of muslins, lawns and prints from fading. A teaspoonful of finely powdered borax put in the last water in which white clothes are rinsed will whiten them surprisingly. This is especially good to remove the yellow that time gives to white garments that have been laid aside for two or three years. It may not be generally known, but finely powdered borax is one of the best articles for a severe cold in the head. If a little is snuffed up the nose, the congested membrane will give way before this simple treatment and the nostrils clear out in a short time.

At house-cleaning time, probably more than at any other, the worth

of ammonia and borax is thoroughly appreciated as wonderful lighteners of labor. Painted walls and other surfaces can be quickly cleaned by washing with weak ammonia water. Floors scrubbed with it come out white and sweet smelling. It is good for window washing, scrubbing, sinks, general dish-washing, in fact, for anything where the alkali of soap is needed to cut dirt or grease. Many housekeepers use ammonia water to clean carpets. If ingrains, it is put in the water in which they are washed, but if brussels, moquettes, or still costlier grades, after the carpets have been taken up and thoroughly beaten, the floors scrubbed and the carpets again laid and tacked down, the surfaces are thoroughly gone over with clean white cloths rung out of warm weak ammonia water to remove any remaining dust and to freshen up the colors. Ammonia in the proportion of a teaspoonful to a teacupful of warm water is a cleanser of silver ware, silver and gold jewelry.—*Golden Rod*.

WHITEWASH.

The whitewash used by the Light-house Board of the Treasury Department of the United States, is probably one of the best known for outside work, and it will probably prove satisfactory if you make it according to the following directions: Slake one half bushel of good, clear stone lime in boiling water, keeping the lime covered during the process. Strain the slaked lime and add one-half peck of salt previously dissolved in warm water; three pounds of ground rice which has been boiled to a thin paste; one-half pound of powdered Spanish whiting and one of clear glue dissolved in hot water; mix all together and let it stand for several days. Keep in a kettle and heat when used, applying the whitewash hot with a painter's or whitewash brush, choosing a clear dry day for the operation.

POLISHING FURNITURE.

For filling and varnishing or otherwise finishing homemade furniture. Nothing is better as a filler than raw oil. Give first a coat let it dry and then sand paper until perfectly smooth. For oak or any very hard wood, one coat will be sufficient; for yellow or Georgia pine or California redwood, repeat the process two or even three times. Of course the easiest finish to apply after the wood is "filled" and is perfectly smooth is a good wood varnish, which can be got from any paintshop. But for careful work we greatly prefer beeswax polish. Melt the ordinary yellow beeswax with a little turpentine and apply with a flannel rag, polishing afterward with a soft old toothbrush and piece of flannel until it becomes very bright. Treated in this way the wood grows better, year by year, until it will finally attain a lustre which is quite brilliant, and which is superior to any shiny varnish. This is much more troublesome than simply varnishing, but for careful hand-made work is quite worth the extra work.

NOTHING.

POTATO.—Mold one inch thick, cut in strips. Boil like doughnuts. Lay on napkin and put in oven to drain off extra fat.

POTATO OMELET.—Chop very fine, do not brown; mix with gravy or water, press down and brown this time. Invert on oval dish.

FORKED POTATO.—Cold potato may be forked over and browned in oven or pan.

PINE APPLE slices and an orange or two may be chopped up together and served.

COLORED SUGAR FOR ICING.—Rub lumps of sugar thoroughly over orange or lemon rind.

SERVING TONGUE.—Cut lengthwise, serve either hot or cold, with sauce. Let both get cold, skim grease and make into clear soup with thread-like noodles.

TOOTH TINCTURE.—Steep cedar chips, use liquid.

CUCUMBER JUICE.—Use for complexion.

TOILET WATERS.—Steep Elder flowers, or lavender or mint. Use for friction or bath ointments. Lemon rind may be used.

HUNGARY WATER.—Rosemary lemon peel, roses. Sage use in pillows and as toilet water.

YARN BAG.—Five pasteboard pockets, lined and covered, fastened together and hung up.

TO KEEP FLANNELS.—Do not soap, freeze or iron. Have suds prepared and rinse in warm water. Pull in shape.

CHAIR.—Cover box with board, high back nailed on. Use straight valance, stuff with husks.—B.

FRUIT PUDDING, WITH ENAMEL SAUCE.

Three cups of white bread crumbs made from stale bread, dried on stove top and rolled to crumbs; one cup chopped fruit, preserve, etc. Mix several kinds boiled orange or lemon peel. Mix a day before using. Use no flour or egg, but add sour milk and one-half teaspoon soda. and steam in mold, tying down tightly. This is after the recipe for plum pudding. Leaving no room to swell makes pudding firm. It will not get heavy, so may be re-steamed.

ENAMEL SAUCE.—Whites of two eggs whipped with decision before putting in; three tablespoonsful sugar. Boil a cup of butter with lemon peel, pour boiling hot into whites, beating for five minutes, serve cold and tell me if you like it.—S. D.

HYGIENE.

SUNSHINE AND SLEEP.

Sleepless people—and there are many in America—should court the sun. The very worst soporific is laudanum, and the very best, sunshine. Therefore it is very plain that poor sleepers should pass as many hours as possible in the sunshine, and as few as possible in the shade. Many women are martyrs, and yet they do not know it. They shut the sunshine out of houses and their hearts; they wear veils, they

carry parasols, they do all possible to keep off the subtlest and yet most potent influence which is intended to give them strength and beauty and cheerfulness. Is it not time to change this, and so get color and roses in their pale cheeks, strength to weak backs, and courage to their timid souls? The women of America are pale and delicate; they may be blooming and strong; and the sunlight will be a potent influence in this transformation.

HOW TO STOP BLEEDING.

If a man is wounded so that blood flows, that flow is either regular, or by jets or spurts. If it flows regularly, a vein has been wounded, and a string should be bound tightly around below the wounded part, that is, beyond it from the heart. If the blood comes out by leaps or jets, an artery has been severed, and the person may bleed to death in a few minutes; to prevent which apply the cord above the wound, that is, between the wound and the heart. In case a string or cord is not at hand, tie the two opposite corners of a handkerchief around the limb, put a stick between and turn around until the handkerchief is twisted sufficiently tight to stop bleeding, and keep it so until a physician can be had.

CURE FOR IVY POISONING.

Bathe the parts affected with sweet spirits of nitre. If the blisters are broken so that the nitre be allowed to penetrate the cuticle, more than a single application is rarely necessary, and even where it is only applied to the surface of the skin three or four times a day, there is rarely a trace of the poison left next morning.—*Hall's Jour. Health.*

The following recipe is said to make a very refreshing wash for the sick room. Take of rosemary, wormwood, lavender, rue, sage and mint, a large handful of each. Place in a stone jar, and pour over the whole one gallon of strong cider vinegar; cover closely and keep near the fire for four days, then strain, and add one ounce of powdered camphor. Bottle, and keep tightly corked. The vinegar is very aromatic, cooling and refreshing in the sick room, and is of great value to nurses.

OUR BOYS AND GIRLS.

LOST IN THE FOG.

Even old hunters, who have roamed the plains and mountains until they are familiar with every foot of the ground, are liable under peculiar circumstances to become bewildered. They are completely "turned around," as the common saying is. The streams all flow the wrong way, and the sun sets in the east. As soon as the experienced hunter realizes his condition, he makes a camp, lies down and goes to sleep. When he awakes everything has come round right.

But more troublesome than such an attack is the coming of a fog. In a few minutes the peaks and headlands, the guides by which the traveler lays his course, are obscured and the sun is hidden. In an article contributed to "The Big Game of North America," the Rev. Joshua

Cooke narrates his experience in a fog, while hunting with his son among the mountains of Oregon.

One morning, though there was every indication that a fog might roll down by noon, they started for a hunt. Several deer fell to their rifles, when the son came running, and exclaimed: "Father, the fog is coming. We must leave the deer; the sun is hidden, and we have not a compass. Hurry!"

They started on a run, but had not gone far before day was turned into night, and objects at two rods distance were obscured. The son, a ranchman, familiar with the mountains, stopped, leaned on his rifle and said:

"Father, we are in a bad fix. All depends on my keeping my head level. Please don't give me any counsel, or object to anything I say or do. It will only confuse me, and then we shall be lost. I will do my best."

"Before I take up silence," answered the father, "let me say this: We are now on an ascent; by keeping up as long as it continues, we must come to some hilltop, which is our only chance for an outlook if the fog should break a little."

"It is a good thought, and may save us," replied the son, leading the way up into clearer ground, and then to the summit. It was barely noon, but the fog made it as dark as night. Even from the summit there was no outlook.

"I will climb that fir; perhaps I can see from above," said the son. He went up sixty feet, no outlook.

"May I speak, my son?"

"Yes, for I am all at sea."

"Well, just beyond the top of the fir is the faintest show of more light than elsewhere. If so, that is the sun, and that is the south, for it is noon."

"Then," said the son pointing his finger, "that is east, and there is our camp. Don't lose the direction, for I can't keep it up here."

He came down and took the direction. By keeping near objects directly ahead and moving carefully from one to another, the two men came within an hour to a black cattle-horse standing at his stake, his body dripping with the rain-like mist.

"Father, it's Jack," exclaimed his son, as the horse gave a faint neigh; "we are safe home! God bless you! You didn't bother me today."

Two other men of the company were lost that day in the fog, and wandered off west instead of going east. They were out all night, and were set right by some Indians. They had to travel forty miles to reach the cabin.—*Youth's Companion.*

THE "BOY'S CLUBS" IN NEW YORK.

An interesting article on this subject is contributed to *Scribner's*, by E. J. Wendell. Ten or more of these clubs are in successful operation in the city of New York, and are doing much to educate and refine a class of boys who have hitherto been hard to reach. Mr. Wendell says:

All the clubs have libraries, more or less good; some of them let the boys take books home, when they have shown themselves, by good be-

havior, to be worthy of confidence, many of them have a class in something, to interest the boys who care to work; several have penny saving-banks; all of them have games, excepting the Avenue O Working Boys' Club, which admits only the boys who come to attend the trade classes; a number have debating societies, in which weighty matters of world-wide interest are discussed and dismissed with a rapidity which would greatly expedite our national legislation if the system could be successfully introduced at Washington two or three of them give their members an excursion in summer; and they all give the boys periodical entertainments, some as often as once a week, and others once a month, or at longer intervals.

They like anything in the form of an entertainment—magic-lantern, stereopticon lecture, banjo-playing; ventriloquism, legerdemain, any kind of instrumental music that is not too classical, heroic or humorous recitations, and especially comic or sentimental songs in which they can join in the chorus. You have never heard "Annie Rooney" or "McGinty" sung unless you have heard it sung at boys' club; nor have you ever heard "America" sung as they can sing it. Thanks to the public schools, they know nearly all the more familiar national and patriotic songs—"My Country, 'tis of Thee," "The Red, White and Blue," "Marching Thro' Georgia," "Hail, Columbia," and "The Star-Spangled Banner"; and the life and earnestness they put into the singing of them can not but impress any one who hears it with the importance of surrounding them, so far as it can be done, with influences which will tend to turn their enthusiasm into the right channels, and which will prevent their becoming the foes to society which the roughness of street life is apt to produce when they have not had a fair chance to see the gentler side of life.

THE GIRL-GUEST WHO IS WELCOME.

The welcome guest is the girl who, knowing the hour for breakfast, appears at the table at the proper time, does not keep others waiting, and does not get in the way of being down half-an-hour before her hostess appears.

The welcome guest is the girl who, if there are not many servants in the house, has sufficient energy to take care of her own room while she is visiting; and if there are people whose duty it is, she makes that duty as light as possible for them, by putting away her own belongings, and in this way not necessitating extra work.

The welcome guest is the one who knows how to be pleasant to every member of the family, and yet who has tact enough to retire from a room when some special family affair is under discussion.

The welcome guest is the one who does not find children disagreeable, or the various pets of the household things to be dreaded.

The welcome guest is the one who when her hostess is busy, can entertain herself with a book, a bit of sewing, or the writing of a letter.

The welcome guest is the one who when her friends come to see her,

does not disarrange the household in which she is staying that she may entertain them.

The welcome guest is the one who, having broken the bread and eaten the salt of her friend, has set before her lips a seal of silence, so that when she goes from the house she repeats nothing but the agreeable things that she has seen.

This is the welcome guest, the one to whom we say good-bye with regret, and to whom we call out welcome with the lips and from the heart.—*Ladies' Home Journal.*

SUNDAY READING.

The Aged Believer at the Gate of Heaven.

I'm kneeling at the threshold, weary, faint and sore,
Waiting for the dawning, for the opening of the door;
Waiting till the Master shall bid me rise and come
To the glory of His presence, to the gladness of his home.

A weary path I've traveled, 'mid darkness, storm and strife;
Bearing many a burden, struggling for my life;
But now the morn is breaking, my toil will soon be o'er,
I'm kneeling at the threshold, my hand is on the door.

Methinks I hear the voices of the blessed as they stand,
Singing in the sunshine of the sinless land;
O would that I were with them, amid their shining throng,
Mingling in their worship, joining in their song.

The friends that started with me have entered long ago,
One by one they left me, struggling with the foe;
Their pilgrimage was shorter, their triumph sooner won,
How lovingly they'll hail me when my toil is done!
With them the blessed angels, that know no grief nor sin,
I see them by the portals, prepared to let me in.
O, Lord, I wait Thy pleasure, Thy time and way are best;
But I am wasted, worn, and weary, O, Father, bid me rest!

THE RIGHTEOUS MAN'S REWARD.

We generally consider the righteous man in the aspect of a profoundly religious man, and the expected and promised reward such as he may look for only in the future state. It is, however, no sacrilege to claim that there are righteous men and women who do not make known their religion otherwise than by its fruits, and whose reward is the most natural result of right doing. The righteous man is simply one who in all the relations of his acts up to the noblest instincts of honor and duty; whether moved by an inner light or a power above, is not always manifest, or consciously recognized; but, he goes through life with the single purpose of doing right, and with that in view, becomes a useful and honored member of society—whose influence for good is beyond our feeble comprehension. It is this kind of righteous men which, more than the power of preaching, or law making, or missionary labor, carries conviction of the evil of sin and the beauty of holiness, and it is no mean reward for him who so lives, that when his work is ended, his entire course through life is marked by earnest

effort for the general good of mankind, and the faithful performance of every personal duty, with zeal and integrity. Such is the inevitable fruit of a godly life, and when we find it, we need not ask what was his creed for we have the best evidence of inward grace, and we know that he is the noblest work of his maker.

CERES.

DON'T WORK SO MANY HOURS.

Work for a Less Time Each Day.

We never work but ten hours a day at farm work, and haven't for a good many years, says T. B. Terry in the *Practical Farmer*. We used to work from early morning until 8 or 9 P. M. It was foolish, drudging way, and we then thought it was necessary. Eight or ten hours of sharp, systematic work will accomplish the most in the long run, and then one has a chance to rest and live a little as he goes along. I presume many who will read this will not believe this doctrine, but it is true. When taking a ride yesterday I saw two hired men who were cultivating, as their employer thought, sitting in the shade "resting their horses." I do not blame them, knowing the number of hours a day they have to put in. And it is many years since I have seen a man of mine shirking during working hours. When well treated they take pride in getting along with the work. I am pretty certain my man cultivated yesterday more than either of the men spoken of. We work while we do work, and then quit and enjoy life a little. What is the use of keeping the lawn neatly mowed, and having flowers and pretty things, if one can not have time from day to day to rest a little and enjoy them? It isn't an unusual thing for us to take a drive after supper, and even stop on the way and get some ice-cream.

THE WHEAT MARKET.

The condition of the wheat and the supply as compared with the demand is attracting great attention at this time. We give the following summary of the situation from the N. Y. Times, one of the best informed and conservative journals.

"Many estimates of the quantity of wheat that will be required by the countries which do not supply their own wants, and of the quantity that can be sold to them by other countries in Europe, which commonly have wheat to sell, have recently been published. Some of these estimates, which set forth a most alarming deficiency, were undoubtedly misleading. A conservative review of the situation, written by the well-known London correspondent of *Bradstreet's*, was published by that journal on the 8th inst. The aver-

age annual quantity of wheat exported from Russia for the last five years has been about 90,000,000 bushels. "It seems a liberal allowance," says the correspondent of *Bradstreet's*, "to reckon (this year) on an export surplus of 40,000,000 bushels. Nothing is subtracted on account of the shortness of the rye crop, in order to avoid exaggeration of the situation in Russia." But it is well known that there is a very great shortage in rye, and since this review was published the Russian Government has forbidden the exportation of this staple.

Having considered the indication in all the European countries, the correspondent finds that the countries producing more than they consume will probably have 90,000,000 bushels to sell, (including 40,000,000 from Russia,) while the other countries will need 371,000,000 bushels more than they produce. Here is a deficiency of 281,000,000 bushels to be supplied outside of Europe, and we are inclined to think that this estimate is too small. If the average quantity be allowed for India, say 30,000,000 bushels, there will remain 248,000,000 to be sent from the United States, Australia, Canada, Northern Africa, Egypt and South America. It does not seem probable that from the countries in the list outside of North America there can be procured more than 30,000,000 bushels. This leaves 218,000,000 for this country and Canada, and it is reported that there may be a surplus of 200,000,000 in the Dominion.

"These estimates of Europe's requirements seem to us, in the light afforded by other estimates and reports, very conservative. It seems probable that Europe will be glad to take even 20,000,000 bushels from us if we shall be able to spare so much and if it can be bought at a reasonable price. At all events, it will be safe to believe that we can sell as much as we sold from the crop of 1880. Unfortunately, the financial condition of our customers in Europe is not so good that they can afford to pay very high prices for their bread, and if we determine to exact a high price their consumptive requirements will probably be reduced. Even if the price of American wheat should not be high, the purchase of so much as they will need will severely tax their resources, and this must be borne in mind by those who are looking forward to unprecedented sales. At fair prices however it seems very probable that we can sell all we shall have to spare.

BRIEF NEWS SUMMARY.

FOREIGN—The French squadron left Cronstadt—The Columbian fair commissioners visited German officials—Parliament was prorogued—A large deficit was discovered in the St. Peter's pence fund—A famine is imminent in Madras—A band of men attacked the sentries on duty at the barracks in Barcelona, Spain. A regular battle was fought and a number on both sides were wounded. Finally the attacking party was surrounded and captured. The movement was in favor of a republic—M. Roustan, the French minister at Washington, has been appointed French minister to Spain—A building at Rathenow, Germany,

in which the stores of the garrison at that place were kept, was struck by lightning and consumed, with its contents, causing a loss of \$375,000.

GENERAL—The encampment of the G. A. R. was held at Detroit and Captain John Palmer, of New York, elected commander—Claus Spreckles began a fight against the sugar trust—Seven New York newspapers were indicted for publishing accounts of the Sing Sing executions—The Catholic Total Abstinence Union met in Washington—The third annual convention of the United States Letter Carriers' National Association met in Detroit—The steamer *Majestic* reduced the record from Queenstown to New York—A terrible railroad accident occurred on the West Shore Railroad, thirteen killed, twenty injured—Thomas Bocoock, ex-Speaker of the Confederate Congress, died—James Russell Lowell is dead—The American dory *Sea Serpent* arrived in Europe—A desperado robbed a bank in Columbus Grove, O., after killing one man and wounding two others—The steamship *Cachmere* crossed the Atlantic with fire in her coal bunkers—The recommendation of the fortification board that the contract for one hundred big guns be awarded to the Bethlehem Iron Company of Pennsylvania was approved by Acting Secretary of War Grant—The Glendon Lumber Company, of Boston, failed—Frederick Douglas, minister to Hayti, resigned—Cyclones caused much damage in Western States—A big loan swindle was exposed in Chicago.

MARYLAND—First Lieutenant Albert B. Scott will be succeeded at the Maryland Agricultural College by Second Lieutenant John S. Grisard—John G. Wheeler, a school teacher, was shot and killed in Charles county, Md., by John M. Rye, in a quarrel—Ellicott City has arranged for electric lighting—Howard county wheat has suffered materially from rain—Mr. T. A. Bounds, of Wicomico county, died suddenly, aged sixty-one years—Mrs. Griffin, badly injured by the Southern Maryland cyclone, July 18, has since died, and her brother, John Moreland, has lost his mind—"Rosecroft," in St. Mary's county, has been sold to Alexander Kennedy, of Florida—Measures have been taken in Baltimore looking to the establishment of an immense abattoir at the Claremont stock yards—Colored people of Maryland will try to make a creditable exhibit at the Raleigh Exposition—Mr. John R. Seemuller, the tobacco merchant, died at Deer Park—The July exports of Baltimore were valued at \$4,407,041—The old Methodist Protestant church corner Washington and Lombard streets has been sold to the Germania Bank—Frederick city's tax rate is 87½ cents on the \$100—Taxes in Queen Anne's county are 93 cents on the \$100—The Maryland Steel Company, at Sparrow's Point, has begun the making of Bessemer steel—Rock Creek and vicinity, in Anne Arundel county, was visited by a destructive tornado—The large bank barn on the farm of S. C. Linton Cramer, one mile west of Johnsville, Frederick county, was struck by lightning and destroyed, with all its contents.

BALTIMORE MARKETS—Aug. 14.

BREADSTUFFS.

Flour—Strong, following rise in wheat. Quotations: Western Winter Wheat Super 3-40 a 3-50; do do do Extra 3-55 a 4-25; do do do Family 4-50 a 4-85; City Mills Super 3-40 a 3-65; Rye Extra 5-10 a 5-25; Rye Flour 4-25 a 5-60; Corn Meal, per 100 lbs 1-50 a 1-60.

Wheat—There is much excitement in the wheat markets, and the price has advanced briskly. It is strong and active at this port. Southern sold at 100¢ for Fultz and 102¢ for longberry. Western strong, with sales of No. 2 red spot at 1 07, October 1 07½, December 1 09.

Corn—Steady but dull. Southern white selling at 70 cents, yellow at 70½ cents. Western was dull at 70 cents for mixed spot.

Oats—Firm to strong, with quotations: Ungraded Southern and Pennsylvania 45¢ a 46¢, Western white 47¢ a 48¢, do. mixed 44¢ a 45¢, No. 2 white 48 cents, and No. 2 mixed 44 cents per bushel.

Rye—Strong. Good to prime sold at 90¢ a 95¢, common to fair 84¢ a 89¢.

Hay and Straw—Hay is firm and active, and choice hay is scarce and wanted. New \$2 to \$3 under old. We quote: Choice old \$15 a \$16; good to prime \$14 a \$15; mixed fair to good \$12.50 a \$13.50; common and inferior \$10 a \$11. Clover nominal, \$9 a \$10; off grades \$8.50 a \$9.50, on track. Straw is in less liberal supply, with demand somewhat better for both old and new. We quote: Rye, in carloads, at \$10.50 a \$11.50 for large bales in sheaves; \$9 a \$10 for blocks; wheat blocks \$8 a \$9; oat blocks wanted at \$11 a \$12. At Scales—Hay—Timothy 15 a \$17 new Hay 9 a \$12; Clover Hay 10 a \$11 per ton. Straw—Wheat \$8, Rye 11 a \$13, Oat \$6 per ton. Bar Corn 8.50 a \$14.00 per bbl.

Mill Feed—We quote: Western bran; light, 12 a 13 lbs., \$15.00 a 16.00; medium, 14 a 16 lbs., 14.00 a 15.00; heavy, over 16 lbs., \$13.50 a 14.00, and middlings \$14.50 a 15.50, with spring bran ranging \$1.00 per ton under these figures, all on track. City Mills middlings \$17 per ton, delivered.

Tobacco—Receipts liberal and demand good. We quote: Inferior and frosted, \$14.50; sound common, \$23; good do, \$45; middling \$28; good to fine red, \$51; fancy, \$12 a 13; upper country \$3 a 10; ground leaves \$1 a 3.

Wool—Dull. We quote: Unwashed extra choice and light 25¢ a 26¢; average lots 24¢ a 25¢; merino 15 a 18¢; tub washed fair to choice 30 a 33¢; pulled 25 a 28¢.

Provisions—Steady, with quotations as follows: Smoked sugar-cured Shoulders, 8½ cts; smoked Breasts, 10 cts; canvased and uncavased Hams, small averages, 12½ cts; large averages, 12 cents per pound. Mess Pork, old, \$12.00, and do. new \$13.50 per bbl. Lard, best refined, pure, 8½ cents per pound.

Butter—Firm at quotations. Fancy creamery jobbing at 20 cts. to choice creamery 18 cents per pound. Imitation creamery 17 a 18 cents per pound. Fancy lard-packs 14 a 15 cents, prime to choice do. 13 a 14 cents per pound. Store-packed 11 a 13 cents, and creamery Prints 10 a 20 cents per pound.

Cheese—Firm. We quote fancy full cream, New York State, 50 to 60 lbs., 9½ a 9¾ cents; choice full cream 9 a 9½¢; New York flats, 30 to 35 lbs size, 9½ a 9¾¢ per lb; 20 lbs size 10 a 10½¢ per lb.

Eggs—Quiet at 15 a 15½¢ doz; Western 15 cts. dozen.

Poultry—The demand exceeded the supply. The quotations were: Large and fancy Spring Chickens 14¢ per lb; small do. to medium 14¢ per lb; old Hens 12¢ per lb, and old Roosters 25 a 30¢ a piece. Spring Ducks, small, 10¢ per lb; large 11¢ per lb, \$2.50 a 3.50 dozen.

LIVE STOCK.

Beef Cattle—Dull. We quote as follows: Very best on sale to day 4½ a 5 c. that generally rated first quality 4 a 4½ c. medium or good fair quality 3½ a 3¾ c. ordinary thin steers, oxen and cows 2½ a 2¾ c. extreme range of prices 2½ a 5 c. most of the sales were from 2½ to 4½.

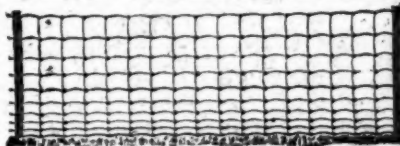
Sheep and Lambs—Slow. Sheep sold at 2 a 4½ c, and lambs at 4 a 5½ c gross.

NOTICE.

The publication of THE AMERICAN FARMER will be continued, as heretofore, under the style of SAMUEL SANDS & SON, by the undersigned.

WM. B. SANDS.

Baltimore, July 28, 1891.



Since Noah turned them out to grass.

The animals with ease—

Like legislators with a pass—

Could go just where they pleased.

But now the Coiled Spring Act's in force.

Reform is in the air.

And Honorable animals, of course,

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Ornamental Trees,

And can supply you with anything in that line.

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Write for what you want direct to the grower. I have given many years especial attention to this business, and will use my best endeavors to serve you well.

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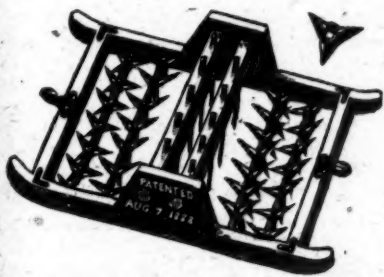
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" \$266.66 in case of total disability under

" 3 years membership.

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